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| 10/600,142      | 06/19/2003  | Steven McCanne       | 019599-000120US     | 6248             |

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| EXAMINER |
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DONAGHUE, LARRY D

|          |              |
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| ART UNIT | PAPER NUMBER |
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2154

DATE MAILED: 04/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/600,142

Applicant(s)

MCCANNE, STEVEN

Examiner

Larry D Donaghue

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 10-23 is/are pending in the application.
- 4a) Of the above claim(s) 15-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 10-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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1. Claim 1 and 10-15 are presented for examination on the merits.
2. Claims 21-23 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 11/15/2004. Claims 16-20 are withdrawn from further consideration without traverse in the same reply.
3. Applicant's election with traverse of restriction in the reply filed on 11/15/2004 is acknowledged. The traversal is on the ground(s) that The Examiner's characterization of claim 23 is to configuring a routing system, whereas the claim is more properly described as relating to an overlay routing processor having features recited in the claim. As such, claims 1, 21, 22 and 23 would be more properly described as relating to apparatus, methods and computer readable medium containing instructions for overlay routing and thus would be searched in common classes and subclasses.
4. This is not found persuasive because applicant characterization that all features on a particular processor, are search together, is not deemed persuasive..

The requirement is still deemed proper and is therefore made FINAL.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Torch "The X-Bone" and applicant admission of prior art.
7. As to claim 1, Touch (pages 1-3) taught the invention substantially as claimed, by describing a per-overlay routing daemon (overlay routing processor) that associates computers with the M-Bone (a given overlay group), associates whether received information is associated with the given overlay group, and routes the received information to the computers associated with the M-Bone by selecting an IP-tunnel operating over the existing network infrastructure (native routing protocol). Touch did not expressly teach the using of unicasting.
8. Applicant admission set forth A typical streaming broadcast consists of a server that unicasts a User Datagram Protocol (UDP) flow to each requesting client. Bandwidth is managed very crudely by simply limiting the number of simultaneous active flows via some simple configuration hook at the server. While this approach works for today's demands, it wastes network bandwidth and cannot scale to very large audiences anticipated in the future. A

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successful Internet broadcast system depends on its ability to broadcast audio and video programming to a large number of simultaneous users. Two approaches for broadcasting streaming media are replicated unicast (one user per stream) and multicasting (multiple users per stream). Therefore it would have been obvious to one of ordinary skill in the art to use unicasting to allow Unicast clients can connect directly to overlay routers via unicast so that regions of the network that do not provide native multicast support can be reached.

9. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Touch and applicant admission in view of Amir et al. , "An Application Level Video Gateway".

10. Regarding claims 12-13, Touch teaches the invention substantially as claimed.

See the rejection of claim 1 above. Touch does not teach the additional limitations of claims 12-13. Amir on the other hand teaches that MBONE traffic includes a TTL number in each packet (p. 3). A TTL instruction limits the number of transfers on computers for a given portion (i.e., multicast packet) of information. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Amir regarding the TTL field in the MBONE packets with Touch because they both describe different aspects of the same thing - the MBONE.

11. Claims 1, 10 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hodel, H. "Policy Tree Multicast Routing: An Extension to Sparse Mode Source Tree Delivery", and applicant admission of prior art..

As to claim 1, Hodel taught the invention substantially as claimed, by describing, particularly at page 84, a multicast border router that associates computers on the network with a given overlay group (p. 84 routers in interdomain multicast delivery tree), determines whether received information is associated with a given overlay group (p. 84 plural multicast sessions on interdomain network), and routes the received information to the computers associated with the given overlay group by using the native routing protocol (p. 84 column 2 - native forwarding). Hodel did not expressly teach the using of unicasting.

Applicant admission set forth A typical streaming broadcast consists of a server that unicasts a User Datagram Protocol (UDP) flow to each requesting client. Bandwidth is managed very crudely by simply limiting the number of simultaneous active flows via some simple configuration hook at the server. While this approach works for today's demands, it wastes network bandwidth and cannot scale to very large audiences anticipated in the future. A successful Internet broadcast system depends on its ability to broadcast audio and video programming to a large number of simultaneous users. Two approaches for broadcasting streaming media are replicated unicast

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(one user per stream) and multicasting (multiple users per stream). Therefore it would have been obvious to one of ordinary skill in the art to use unicasting to allow Unicast clients can connect directly to overlay routers via unicast so that regions of the network that do not provide native multicast support can be reached.

As to claim 10, Hodel teaches a system further comprising instructions for handling administrative scooping (p. 84 col. 1 par. 1 ISP control over native multicast).

As to claim 14, Hodel teaches a system further comprising instructions for preventing the transfer of information between predetermined computers (p. 85 prune message processing).

As to claim 15, Hodel teaches a system wherein one or more computers are identified by an address, the overlay routing processor further comprising using the address to prevent the transfer of information between the computers (p. 85 prune message processing).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hodel in view of Decasper, D., "Router Plugins: A Software Architecture for Next Generation Routers"

Regarding claim 11, Hodel teaches the invention substantially as claimed.

See the rejection of claim 1 above. Hodel and Applicant's admission not teach the additional limitation of claim

Decasper on the other hand teaches a system of router plugins (p. 229). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Decasper's router plugin module with the MBR of Hodel because of Decasper's explicit teaching that plugins allow dynamic upgrades, which is seen as an increasingly important (p. 229 abstract). A system including router plugin modules would implicitly include instructions for servicing those modules.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Larry D Donaghue whose telephone number is 571-272-3962. The examiner can normally be reached on M-F 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 571-272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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LARRY D. DONAGHUE  
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to be "L. Donaghue", written over the printed name and title.